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EXAMINER	
TSUI, WILSON W	

ART UNIT	PAPER NUMBER
2178	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/516,736	SU, RONGBIN	
	Examiner	Art Unit	
	WILSON TSUI	2178	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 May 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-76* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *4-13* is/are allowed.

6)☒ Claim(s) *1-3 and 60-76* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This final action is in response to the amendment filed on: 05/03/10.

2. Claims 1, 2, 4, 14, 19, 25, 26, 29, 61, and 72 are amended. Claims 1-76 are pending. Claims 70, 71, 72, 73, 74, 75, and 76 are independent claims.

3. All previous claim objections (14, 19 and 28) with regards to informalities are withdrawn, due to applicant's amendments and remarks.

4. With respect to the 35 USC 112 2nd rejection for claim 61; it is withdrawn, due to applicant's amendments.

5. The following rejections are withdrawn in view of new grounds of rejection necessitated by applicant's amendments:

- Claims 1 and 70 rejected under 35 U.S.C. 102(b) as being anticipated by Yu.
- Claim 61 rejected under 35 U.S.C. 103(a) as being unpatentable over Yu, in view of Chang et al.
- Claim 62 rejected under 35 U.S.C. 103(a) as being unpatentable over Yu, in view of Chang et al, and further view of Tse-Kai.
- Claim 63 rejected under 35 U.S.C. 103(a) as being unpatentable over Yu.
- Claim 64 rejected under 35 U.S.C. 103(a) as being unpatentable over Yu (US Patent: 5,790,055, issued: Aug. 4, 1998, filed: Sep. 22, 1994), in view of Chang et al, and further view of Hon et al.
- Claim 65 rejected under 35 U.S.C. 103(a) as being unpatentable over Yu, in view of Chang et al, and further view of Zhang et al, and in further view of Hon et al.

- Claims 66-69, 75, and 76 rejected under 35 U.S.C. 103(a) as being unpatentable over Yu, in view of Leung et al.
- Claims 71-73 rejected under 35 U.S.C. 103(a) as being unpatentable over Yu, in further view of Geschwinde et al.
- Claim 74 rejected under 35 U.S.C. 103(a) as being unpatentable over Yu, in view of Tse-Kai.

The following claims remain rejected:

- Claim 2 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Yu, in view of Liang.
- Claim 3 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Yu, in view of Liang, and further in view of Tse-Kai.

Priority

6. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Allowable Subject Matter

7. Claims 4-13 are allowed.

8. Claims 14-59 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1, 69 and 70 are newly rejected, claim 2 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Yu (US Patent: 5,790,055, issued: Aug. 4, 1998, filed: Sep. 22, 1994), in view of Liang (US application: US 20020173335 A1, published: Nov. 21, 2002, filed: Jan. 23, 2002)

With regards to claim 1, Yu teaches An encoding and input method of world characters, used in a computer device for encoding and inputting the world characters; said computer device comprising a numerical keypad; Said method comprises the steps of: *for each category of world characters* (column 1, lines 35-37: whereas there are Chinese and Japanese characters), *allocating some basic elements forming the character of this category or capable of determining the character of this category to the corresponding number keys on the numerical pad* (column 5, lines 20-30, claim 1 of Yu: whereas, basic stroke /punctuation types correspond to a particular numeral in a numerical keypad (the numerical keypad/keyboard being the input interface *)), the code of said each basic element is uniquely determined by area code and/or position code, where said area code is the number of the key at which the element is located* (column

5, lines 30-35: whereas, the area code/frame-code is the number of the key that best represents an element at a particular location), *said position code is the position number in the number keys to which the basic element pertains* (column 5, lines 35-43: whereas, a position code/ID block to where a particular basic element pertains is implemented); *selecting the category of the characters to be inputted* (column 1, lines 58-63: whereas the characters are uniquely categorized by beginning geo-stroke method);

for each character or each word of the character category to be inputted, splitting it as a combination of some of said elements (column 5, lines 20-30, claim 1 of Yu: whereas, the character or word is split into a combination of strokes)

arranging in order the codes corresponding to each element in said combination and taking them as the code of the character or the word (Fig 5: whereas, the codes corresponding an element in the combination, are arranged using frame and ID codes);

and inputting the code of the character or the word (Fig 5: whereas, the geostroke code is inputted into a database, and a user can input the code of the character (column 1, lines 60-63)).

However, Yu does not expressly teach … *and a space key arranged proximal to the numeric key pad, ...* inputting a code of the character or the word *based on the arranged codes using the numerical keypad and the space key proximal to the numerical keypad.*

Yet, Liang teaches … *and a space key arranged proximal to the numeric key pad, ...* inputting a code of the character or the word *based on the arranged codes using the numerical keypad and the space key proximal to the numerical keypad* (Figure 1:

whereas a space key is located next to a numerical keypad. Also as explained in paragraph 0040, the space key is used to delimit/confirm/mark a code sequence).
It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Yu's method for encoding characters with a keypad, such that the encoding can also include a space key that resides within same keyboard for input, as taught by Liang. The combination of Yu and Liang would have allowed Yu to have implemented "an easy to use input method, for faster input speed, through the use of a numeric key pad" (Liang, paragraph 0003, 0016)
With regards to claim 2, the encoding and input method of claim 1, Yu teaches wherein said world characters are classified to block characters, linear characters, punctuations and symbols; said block characters are classified as block ideograph character and block phonetic character. Said basic elements respectively comprise basic strokes and the combinations thereof forming the glyph of said block ideograph character; as to the linear character, said elements are the alphabets of the linear character; as to the hybrid character, said basic elements comprise the basic strokes and the combinations thereof forming the block ideograph character, as well as the alphabets forming the linear character; as to the punctuations, said elements are the strokes of the punctuation (Fig 12, Fig 13: whereas coding in connection with Japanese Kata-Kana characters. .

However, Yu does not expressly teach that the encoding of block characters could include PinYin alphabets representing the pronunciation of the block ideograph character, and the alphabets representing the pronunciation and forming the glyph of

the block phonetic character; as to the linear character, said elements are the alphabets representing the pronunciation and forming the glyph of the block phonetic character;

Yet, Liang teaches the encoding of block characters could include PinYin alphabets representing the pronunciation of the block ideograph character, and the alphabets representing the pronunciation and forming the glyph of the block phonetic character; as to the linear character, said elements are the alphabets representing the pronunciation and forming the glyph of the block phonetic character (whereas, the pronunciation of glyph characters can be represented using phonetic alphabets, as shown in Fig 3. and explained in paragraph 0032, and 0033);

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Yu's character encoding system, such that it would have been capable to have encoded Pinyin alphabets, using a numeric keypad as taught by Liang. The combination of Yu and Liang would have allowed Yu to have made "an easy to use input method, for faster input speed, through the use of a numeric key pad" (Liang, paragraph 0003, 0016).

With regards to claim 69, which depends on claim 1, further comprising the steps of: input codes of world characters, phrases, or sentence sequentially by means of keys 0-9, as similarly explained in the rejection for claim 1 (and Figure 1 of Yu), and is rejected under rationale.

However, Yu does not expressly teach confirm the completion of inputting the codes of world characters, phrases, or sentence by pressing space bar to confirmation key; select the world characters or phrase with keys of Page Up and Down function or other arrow keys; confirm the selected world character or phrase with the keys 1-9.

Yet, the combination of Yu and Liang et al similarly teaches teaches using specific keys to confirm completion, selection, confirmation, as explained in the rejection for claim 1. Furthermore, Liang further teaches the completion, selection, and confirmation for entering input codes to include (paragraph 0040, the space key is used to delimit/complete/confirm/mark a code sequence. Additionally, as explained in paragraph 0050, claim 6 of Liang, further explains a particular key that is used to switch/select the type of input code).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Yu and Liang's method for inputting codes, such that various keys can be assigned for completion, selection and confirmation for different modes of operation, as taught also taught by Liang. The combination would have allowed Yu to have implemented "an easy to use input method, for faster input speed, through the use of a numeric key pad" (Liang, paragraph 0003, 0016).

With regards to claim 70, Yu teaches a programming method of computer programming language in world character, said method comprising the steps of:

Taking world characters, punctuation, symbols and numbers as the programming characters (Yu, Fig 5: whereas world characters, numbers using a 10 key pad, and stroke types/symbols are implemented), *and programming based on the type, format, and content and application of computer languages* (whereas, the programming is based on the type of numerical combination, stroke/punctuation format and content, and encoding for application use); *and encoding and inputting the world character by using the encoding and input method and its processing device according to claim 1* (as similarly explained in claim 1).

10. Claims 3 remains and claim 74 is newly rejected under 35 U.S.C. 103(a) as being unpatentable over Yu (US Patent: 5,790,055, issued: Aug. 4, 1998, filed: Sep. 22, 1994), in view of Liang (US application: US 20020173335 A1, published: Nov. 21, 2002, filed: Jan. 23, 2002), and further in view of Tse-Kai (US Patent: 4,868,913, issued: Sep. 19, 1989, filed: Aug. 27, 1987).

With regards to claim 3, which depends on claim 2, the combination of Yu and Liang teaches wherein said block ideograph characters include Chinese character for which said basic elements may respectively include the basic strokes and the combinations thereof forming the glyph of the Chinese character, the PinYin alphabets or the initial consonant and the final representing the pronunciation of the Chinese character, the basis strokes and the combinations thereof forming the glyph of Chinese character and the PinYin alphabets or the initial consonant and the final representing its pronunciation,

as similarly explained in the rejection for claim 2, and is rejected under similar rationale; However, Yu does not expressly teach *said block phonetic characters include Korean character for which said basic elements respectively include the basic strokes and the combinations thereof forming the glyph of Hanja character, the Korean alphabets forming the Korean character, and the Korean alphabets representing the Korean pronunciation of the Hanja character; said linear characters include English, French, German, Italian, Spanish, Russian, Greek, and Arabic for which said basic elements are their alphabets; Said hybrid characters include Japanese for which the basic elements include the basic strokes and the combinations thereof forming the glyph of Kanji characters, the kana forming the Japanese characters, the kana representing the Japanese pronunciation of the Kanji characters, and the alphabets forming Japanese Roman words; Said punctuations including: full stop (.), hyphen (-), dash (-), commas (,), caesura sign (), separation mark (.), emphasis mark (.), ellipse (. . .), exclamation mark (!), semicolon (;); colon (:), quotation mark (?), single book-title mark (< >), double book-title mark vertical single quotation mark (.PI. .right brkt-bot.), vertical double quotation mark ( ), horizontal double quotation mark (" "), horizontal single quotation mark (` `), bracket ( ), hollowed square bracket solid square bracket blank, plus, subtraction, times, division, &, $, %, .English Pound., .PSI., .OMEGA., .PI.@.*

Yet, Tse-Kai teaches implementing Korean characters, and as linear characters in an encoding process (claim 4 of Tse-kai), as well as one or more single punctuations such as comma, or book title mark (Fig. 10).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Yu al's method for encoding a sequence of codes to particular keys for various characters, such that Korean and Linear characters, as well as various symbols are implemented, such as those taught by Tse-Kai. The combination would have allowed Yu to have "implemented a method for coding languages of different countries … [by] assigning digital codes" (Tse-Kai, column 3, lines 20-26).

With regards to claim 74, Yu teaches *a design method of computer operating system in world character, said method comprising the steps of:*
take graphs, world characters, punctuations, symbols and numbers as operators to design a computer operating system on the basis of its type, application and task;
name a file with the world characters, and access the storage address of the file in the disk by the file name in world characters;
encode and input world characters regarding or regardless of the countries to which the characters pertain according to the encoding and input method of claim 1, as similarly explained in the rejection for claim 1, and is rejected under similar rationale.
However, Yu does not expressly teach using *alphabets, and kana,* as operators to design a computer operating system.
Yet, Tse-Kai teaches using *alphabets and kana* as operators to design a computer operating system (Fig 13, column 8, lines 36-67: whereas, Russian alphabet is implemented, as well as Japanese Kana, and punctuation in the encoding process).

It would have been obvious to one of the ordinary skill in the art to have modified Yu's method for encoding world characters using numerals, to have further included the encoding of alphabets, and Kana as taught by Tse-Kai. The combination of Yu would have allowed Yu to have "provided a system of coding languages of different countries and especially those countries that do not use alpha-numeric characters, [such that] coding a language is easy to learn and memorize" (Tse-Kai, column 3, lines 20-29).

11. Claim 61 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yu (US Patent: 5,790,055, issued: Aug. 4, 1998, filed: Sep. 22, 1994), in view of Liang (US application: US 20020173335 A1, published: Nov. 21, 2002, filed: Jan. 23, 2002), and further in view of Chang et al (US Patent: 6,389,166 B1, issued: May 14, 2002, filed: Aug. 18, 1999).

With regards to claim 61, which depends on claim 1, Yu teaches *further comprising the steps of: according to the glyph of the punctuation by the operational encoding method of addition and subtraction; classifying the strokes of the punctuation into five basic strokes, that include horizontal , vertical, left-falling, dot, and hook, defined with codes of 1, 2, 3, 4, and 5 respectively* (see Figure 1: whereas the punctuation has five strokes, with each stroke of the punctuation being defined with one of codes 1 - 5)*; adding the code of the strokes of the punctuation to obtain a sum* (whereas, the strokes are concatenated together to form a code, as shown in Figure 3) *wherein the encoding is performed by single punctuations and dual punctuations according to the number of*

elements forming the punctuation (whereas, the punctuation strokes can include a plurality of strokes).

However, Yu does not expressly teach *and performing the operation of subtracting ten if the sum is equal to or over ten on the sum to derive the code of the punctuation*.

Yet, the operation of encoding a type of permutation is known in the art. This is further evidenced in the teachings of Chang et al (Abstract: whereas, the number of sequence codes are compressed/reduced, to obtain the sequence codes of candidate characters).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Yu's method for encoding characters, such that the encoding can be compressed via a method of compressing sequence codes via a compressed alias, as taught by Chang et al. The combination would have allowed Yu to have "reduced the number of matching templates required when matching characters, and reduced the time for matching" (Chang et al, Abstract)

12. Claim 62 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yu (US Patent: 5,790,055, issued: Aug. 4, 1998, filed: Sep. 22, 1994), in view of Liang (US application: US 20020173335 A1, published: Nov. 21, 2002, filed: Jan. 23, 2002), and further in view of Chang et al (US Patent: 6,389,166 B1, issued: May 14, 2002, filed: Aug. 18, 1999), and further view of Tse-Kai (US Patent: 4,868,913, issued: Sep. 19, 1989, filed: Aug. 27, 1987).

With regards to claim 62, which depends on claim 61, wherein Yu teaches *the codes*, as similarly explained in the rejection for claim 1, and is rejected under similar rationale. Furthermore, Yu and Chang et al teaches codes of a sequence of strokes/punctuations via an alias, as explained in the rejection for claim 61.

However, Yu does not expressly teach the codes of *single punctuations are as below: the code of full stop (.) is 0; hyphen (-) and dash (--) is 1; comma (,) is 3; each of caesura sign (), separation mark (.), emphasis mark (.), and ellipsis (.) is 4; exclamation mark (!) is 6; semicolon (;) is 7; colon (:) is 8; and the code of question mark (?) is 9; the codes of dual punctuations are as follows: the code of single book-title mark ( ) is 55; double book-title mark is 10; vertical single quotation mark (.PI. .right brkt-bot.) is 55; vertical double quotation mark ( ) is 00; horizontal double quotation mark (" ") is 86; horizontal single quotation mark (` `) is 43; bracket ( ) is 43; hollowed square bracket is 09, and the code of solid square bracket is 09*.

Yet, Tse-Kai teaches one or more single punctuations such as comma, or book title mark (Fig. 10).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Yu, Liang and Chang et al's method for encoding a sequence of codes to particular keys, such that they would include symbols, such as those taught by Tse-Kai. The combination would have allowed Yu to have "implemented a method for coding languages of different countries … [by] assigning digital codes" (Tse-Kai, column 3, lines 20-26).

13. Claim 63 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yu (US Patent: 5,790,055, issued: Aug. 4, 1998, filed: Sep. 22, 1994) in view of Liang (US application: US 20020173335 A1, published: Nov. 21, 2002, filed: Jan. 23, 2002).

With regards to claim 63, which depends on claim 1, Yu teaches *further comprising the steps of: encoding the numbers in various categories of characters as* shown in Figure 1.

However, although Yu does not expressly teach the specific mapping of characters and characters as explained in claim 63, Yu does teach that the characters can be mapped to encoded numbers as shown in Figure 1.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Yu's system, such that particular characters can be mapped to particular encoded numbers (such as the mapping explained in claim 63 of applicant's invention) using the mapping method also taught by Yu. The combination would have allowed Yu to have “implemented fast and effective ideographic data processing” (Yu, column 1, lines 25-30).

14. Claim 64 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yu (US Patent: 5,790,055, issued: Aug. 4, 1998, filed: Sep. 22, 1994), in view of Liang (US application: US 20020173335 A1, published: Nov. 21, 2002, filed: Jan. 23, 2002), and further in view of Chang et al (US Patent: 6,389,166 B1, issued: May 14, 2002, filed:

Aug. 18, 1999), and further view of Hon et al (US Patent: 6490563, issued: Dec. 3, 2002, filed: Aug. 17, 1998).

With regards to claim 64, which depends on claim 1, Yu teaches wherein said processing device for encoding and inputting the word characters comprises keyboard, mouse, host computer, monitor, key display, printer, modem, router, and information exchanging codes, built-in codes, world character database, font pattern codes, and font exchanging code.

However, Yu does not expressly teach a mouse, printer, modem, and router.

Yet, Hon et al teaches a computer system can also have a mouse, printer, modem, and router (Fig 1: column 4, lines 1-67, column 5, lines 1-12: whereas a mouse, printer, modem, and router can be implemented with the general purpose computer).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Yu's language input system, such that a computer could also support other peripherals such as mouse, printer, modem, and router, as taught by Hon et al. The combination would have allowed Yu to have "practiced the invention in a distributed computing environment" (Hon et al, column 4, lines 5-10) … through the use of a general purpose computing device.

15. Claim 65 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yu (US Patent: 5,790,055, issued: Aug. 4, 1998, filed: Sep. 22, 1994), in view of Liang (US application: US 20020173335 A1, published: Nov. 21, 2002, filed: Jan. 23, 2002), and

further in view of Chang et al (US Patent: 6,389,166 B1, issued: May 14, 2002, filed: Aug. 18, 1999), and further view of Zhang et al (US Patent: 5,197,810, issued: Mar. 30, 1993, filed: Jun. 19, 1990), and in further view of Hon et al (US Patent: 6490563, issued: Dec. 3, 2002, filed: Aug. 17, 1998).

With regards to claim 65, which depends on claim 1, Yu teaches *wherein a keyboard in said computer device is a keyboard comprising ten number keys 0-9* as character keys (as shown in Figure 1, and Figure 8). However, Yu does not expressly teach *14 function keys including answer (yes) key, hang-up (no) key, toggle key, space key, deletion key, mouse (confirm) key, left-click (exit) key, right-click key, cursor up key, cursor down key, cursor left key, cursor right key, * (@) key, and # (.) key*

Yet, Zhang et al teaches *function keys* are not limited to the number keys, but can include various keys such as *including answer (yes)/enter key, hang-up (no)/esc key, toggle key/esc, space key, deletion key, (@) key, and # (.) key,* as shown in Fig. 7 and Fig. 20.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Yu's language input system, such that additional keys featured on a key board can provide additional functionality, as taught by Zhang et al. The combination would have allowed Yu to have "implemented simple and convenient auxiliary inputting methods" (Zhang et al, column 1, lines 56-61).

However, although the combination of Yu and Zhang et al teach using function keys on a keyboard, they do not expressly teach accepting function commands from a mouse.

Yet, Hon et al teaches that a mouse can be used to issue commands in a language system.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Yu and Zhang et al's input system, such that functionality can be enabled through a mouse as well to assist with commands, as taught by Hon et al. The combination would have allowed Yu to have “practiced the invention in a distributed computing environment" (Hon et al, column 4, lines 5-10) … through the use of a general purpose computing device.

16. Claims 66-68, 75, and 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yu (US Patent: 5,790,055, issued: Aug. 4, 1998, filed: Sep. 22, 1994), in view of Liang (US application: US 20020173335 A1, published: Nov. 21, 2002, filed: Jan. 23, 2002), and further in view of Leung et al (US Patent: 6922811 B1, issued: Jul. 26, 2005, filed: Nov. 1, 1999).

With regards to claim 66, which depends on claim 1, Yu teaches *wherein said computer device,* as similarly explained in the rejection for claim 1, and is rejected under similar rationale. However, Yu does not expressly teach that the computing device can be a mobile phone with software.

Yet, Leung et al teaches the computing device *comprises a mobile phone with software* (Abstract: whereas a mobile/pda telephone can be used to input characters).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Yu's input method, such that it can be implemented using a mobile phone, as taught by Leung et al. The combination would have allowed Yu to have "implemented an input method using an apparatus that is simple and convenient … as well as less key touch" (Leung et al, column 1, lines 30-33).

With regards to claim 67, which depends on claim 1, the combination of Yu, Liang and Leung similarly teach *wherein said computer device comprises a personal digital assistant PDA*, in the rejection for claim 66; and is rejected under similar rationale.

With regards to claim 68, which depends on claim 1, the combination of Yu, Liang and Leung similarly teach *wherein said computer device comprises a palm computer*, in the rejection for claim 66; and is rejected under similar rationale.

With regards to claim 75, Yu teaches A design method of interface protocol in world character, said method comprising the steps of:
describe the task to be completed by the interface protocol with world characters, numbers, punctuations, and symbols;
encode the world characters, numbers, punctuations, symbols describing the task to be completed by the interface protocol;
according to the encoding and input method of claim 64 and the computer processing device of claim 64, input and process the codes of the world characters, numbers,

punctuations, and symbols describing the task to be completed by the interface protocol; as similarly explained in the rejection for claim 74, and is rejected under similar rationale.

However, Yu does not expressly teach that the interface protocol is *a wireless* interface protocol.

Yet, Leung et al teaches the interface protocol is a *wireless* interface protocol (Abstract: whereas input data can be communicated wirelessly using a mobile telephone. Additionally as explained in column 9, lines 5-10: whereas, network communication is possible).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Yu method for communicating in world character using a wireless interface protocol, as taught by Leung et al. The combination would have allowed Yu to have "implemented an input method that is simple and convenient, [and] needs less content to learn by rote and less key touch" (Leung et al, column 1, lines 31-32).

With regards to claim 76, Yu, Liang, and Leung et al teach A design method of wireless internet protocol in world character, said method comprising the steps of:

describe the task to be completed by the wireless internet protocol with world characters, numbers, punctuations, and symbols;

according to the encoding method of claim 64, *encode the world characters, numbers, punctuations, symbols describing the task to be completed by the wireless internet*

protocol; according to the encoding and input method of claim 64 and the computer processing device of claim 64, *input and process the codes of the world characters, numbers, punctuations, symbols describing the task to be completed by the wireless internet protocol*, as similarly explained in the rejection for claim 75, and is rejected under similar rationale.

17. Claims 71-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yu (US Patent: 5,790,055, issued: Aug. 4, 1998, filed: Sep. 22, 1994), in view of Liang (US application: US 20020173335 A1, published: Nov. 21, 2002, filed: Jan. 23, 2002), and further in further view of Geschwinde et al ("PostgreSQL Developer's Handbook", publisher: Sams, published: December 2001, page 478).

With regards to claim 71, Yu teaches A programming method of machine language in world character, said method comprising the steps of:
using world characters, numbers, and symbols to describe the task to be completed by the computer machine language (Fig 5: whereas world characters, numbers using a 10 key pad, punctuation and stroke types/symbols are implemented);
using any 4 decimal numerals to indicate the world characters, numbers, punctuations, and symbols that describe the task to be completed by the machine language; or encoding the world characters, numbers, punctuations, and symbols describing the task to be completed by the machine language by 4 decimal numerals, based on the encoding method according to claim 1, *using the codes of 4 decimal numerals to*

indicate the world characters, numbers, punctuations, and symbols that describe the task to be completed by the machine language (column 5, lines 20-43, Fig 5: whereas world characters, numbers using a 10 key pad, punctuations, and stroke types/symbols are implemented. Four decimal numbers such as frame code or ID code are used for encoding the world characters.);

However, although, Yu teaches World characters, numbers, and symbols to describe the task, Yu does not expressly teach *using 4 binary numbers to represent a decimal numeral and totally using 16 binary numbers to represent 4 decimal numerals*.

Yet, Geschwinde et al teaches *using 4 binary numbers to represent a decimal numeral and totally using 16 binary numbers to represent 4 decimal numerals* (page 478: whereas 4 bits are used to store a single decimal number, and using packed BCD, 2 decimals are represented in 8 bits and 4 decimal digits are in a 16 bit word).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Yu 's method for using decimal numerals, such that each decimal number is encoded with 4 binary digits/numbers, as taught by Geschwinde et al. The combination would have allowed Yu et al to have "stored data efficiently", such that bits are not wasted (Geschwinde et al, page 478).

With regards to claim 72, the combination of Yu, Liang, and Geschwinde et al similarly teach a programming method of assembly language in world character, said method comprising the steps of:

using world characters, numbers, punctuations and symbols to describe the task to be completed by the computer assembly language;

using any 4 decimal numerals to indicate the world characters, numbers, punctuations and symbols that describe the task to be completed by the assembly language; or encoding the world characters, numbers, punctuations and symbols describing the task to be completed by the assembly language by 4 decimal numerals based on the encoding method according to claim 1, using the codes of 4 decimal numerals to indicate the world characters, numbers, punctuations and symbols that describe the task to be completed by the assembly language, as similarly explained in the rejection for claim 71, and is rejected under similar rationale.;

With regards to claim 73, the combination of Yu, Liang, and Geschwinde et al similarly teach a design method of computer chip instructions in world characters, comprising the steps of:

taking Chinese character, alphabets, punctuations, symbols and numbers as the instruction design symbols to indicate the task to be completed by the computer chip instructions; based on the encoding method according to claim 1, indicate a world character by the codes of 4 decimal numerals; and represent the task to be completed by the computer chip with 16 binary numbers, as similarly explained in the rejection for claim 71, and is rejected under similar rationale.

Response to Arguments

18. Applicant's arguments with respect to claims 1-3 and 60-76 have been considered but are moot in view of the new ground(s) of rejection.

19. With regards to claim 1, the examiner would like point out in the best interest to expedite the application, the term “area code” in the claim language can be interpreted as a physical area/region with respect to the appearance of a basic element within a character. Additionally, the “position code”, can also be interpreted as a physical area/region with respect to the appearance of a basic element within a character. Thus, the examiner recommends the applicant clarify/distinguish that the area code is really a mapping/allocation of basic elements to a particular key, rather than a region/area of a character (such as shown/taught by Yu) to distinguish from the prior art.

20. The applicant argues that claim 70 is allowable since it depends upon claim 1. However, this argument is not persuasive since claim 1 has been shown/explained to be rejected, as similarly explained above.

21. The applicant argues in page 49 of applicant remarks that claim 2 that Yu does not teach /disclose that “the strokes included in a Geo-Stroke is specified by a numerical key and a position code of a numerical key. However, as explained above, the term “area code” in the claim language can be interpreted as a physical area/region with respect to the appearance of a basic element within a character. Additionally, the “position code”, can also be interpreted as a physical area/region with respect to the appearance of a basic element within a character. Thus, since Yu teaches the implementation of numerical keys to enter stroke data, and the numbers entered by Yu

are with respect to regions/areas of basic elements of characters (column 5, lines 30-43), then Yu still teaches the required claim limitation.

The applicant argues in page 49 of applicant remarks that Liang "does not disclose two digital codes that are used to represent basic elements forming block characters, linear characters, punctuations or symbols. However, Iin response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). As explained in the rejection for claim 1, Yu teaches that basic elements form characters, as similarly explained in the rejection for claim 1. Furthermore, Liang teaches that characters can include phonetic alphabets, such as Pinyin. Lastly, the combination of Yu and Liang, as explained in the rejection for claim 2, teach that encoding of Yu is extended to include Liang's phonetic alphabets. Thus, the applicant's arguments are not persuasive.

22. The applicant argues that claims 61-69 and 71-76 are allowable because they do not remedy the deficiencies of Yu or Liang. However, this argument is not persuasive since the combination of Yu and Liang are explained in the above rejections and response to remarks to teach the argued deficiencies.

Conclusion

23. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILSON TSUI whose telephone number is (571)272-7596. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong can be reached on (571) 272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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